Amendments to the Specification:

Please replace the title with the following:

METHOD OF TRANSMITTING IONS FOR MASS SPECTROSCOPY.

Please insert the following paragraph below the title:

This application is a continuation application of U.S. Patent Application No. 09/835,943 filed on April 16, 2001, now U.S. Patent No. 6,617,577, which is incorporated herein by reference.

Please rewrite the paragraphs that begin on page 5, line 28 and continue through page 6, line 17 as follows:

Referring now to Figure 2, the MALDI pulsed ionizer 12 includes a laser [[20]] 21 configured to pulse a sample located on a substrate 22. Any pulsed laser that can produce ions from a sample for mass spectrometry can be used. The laser [[20]] 21 is preferably a nitrogen laser. As known in the art, the laser may be focused at the sample on the substrate 22 by various optical components, examples of which are shown in Figures 2 and 6. A suitable laser is the VSL-337 Nitrogen Laser manufactured by Laser Science, Inc. of Franklin, MA which operates at a repletion rate of 10-20 Hz. The laser [[20]] 21 can also be a Nd: YAG laser. In Figure 2, the laser [[20]] 21 is focused on the sample through a lens 24 and a mirror 26. Preferably the lens collimates the laser beam and has a focal length of about 1 mm to about 1 meter, preferably about 50 cm. The mirror 26 directs the collimated laser beam through a window 25 towards the surface of the substrate 22 at an angle of about 10 degrees to about 80 degrees, preferably about 60 degrees to the normal of the substrate 22. Preferably the laser beam has a laser spot diameter on the surface of a sample from about 0.3 mm to about 0.5 mm. Preferably the power density of laser radiation in the spot is about $10^7 W/cm^2$. The mirror 26 is preferably configured to be "wobbled" in order to scan the sample with the laser beam. Alternatively as shown in Figure 6, the laser [[20]] 21 can be focused on the sample located on the substrate 22 through an optical fiber 28.

Please rewrite the paragraphs that begin on page 6, line 22 and continue through page 7, line 16 as follows:

Referring now to Figures 2 and 5, preferably the first embodiment of the mass spectroscopy system 10 includes a sample introduction system 30 such as that disclosed in Andrew Krutchinsky's and Brian Chait's co-pending United States Patent Application Serial No. 09/737,660 entitled "High Capacity and Scanning Speed System for Sample Handling and Analysis" filed on December 15, 2000, the disclosure of which is incorporated herein by reference. The sample introduction system 30 generally includes a support plate 27 configured to support a substrate in the form of a compact disc 32 for holding a plurality of samples 34 as shown in Figure 5. The sample introduction system 30 preferably includes a video camera 36 for monitoring the sample during the pulsed ionizing by the laser [[20]] 21 as shown in Figure 2. Preferably the sample introduction system 30 is connected to a pump (not shown herein) via vacuum line 38 which maintains a vacuum lock between the pump and the system 30 such as by use of an o-ring 40 shown in Figure 5.

Referring to Figure 5, the plurality of samples 34 located on the compact disc 32 are preferably formed by dissolving a compound to be analyzed in a solution containing a large molar excess of a matrix forming material that efficiently absorbs the light of the laser [[20]] 21. A small amount of the solution is then deposited on the compact disc 32 and dried to form a sample 34. The samples 34 can be deposited on the compact disc 32 in a variety of known methods including spraying as an aerosol, ultrasonically, or by using a micropipette or fine needle. Preferably, the plurality of samples 34 are discretely deposited over the surface of the compact disc 32 as shown in Figure 5. The location of each sample 34 can be tracked for use with a high speed compact disc drive to enable the analysis of an extremely large number of samples within a short period of time. During the analysis, the matrix absorbs the energy from the laser pulse resulting in the vaporization and ionization of the sample.